AN

INTRODUCTORY ADDRESS

DELIVERED IN THE THEATRE

OF THE

Middlesex Hospital Medical College,

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AT THE OPENING OF THE WINTER SESSION,

BY

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Καλὸν γὰρ τὸ ἆθλον καὶ ἡ ἐλπὶς μεγάλη.

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Gentlemen,

It having devolved upon me to deliver this year the customary introductory address, I should, indeed, feel myself embarrassed and at a loss if it were expected of me that I should say anything new to the majority of my hearers, or even to put before them what is old in a new form; but fortunately on these occasions there is always one part of the audience, those who are seated here for the first time, to whom that which may appear tedious and common-place to the rest, may not be without a certain degree of interest and instruction; those who to-day entering upon a new course of life may fitly be asked to pause for a moment, and, as from some vantage point, to take a brief survey of that yet untrodden country they are now about to travel; not, indeed, as from Pisgah, to look down upon a promised land flowing with milk and honey, which they have only to descend upon to take possession of, but to look upwards rather, with courage indeed, and a good hope, but yet, perhaps, not quite without anxiety, at that lofty mountain of science whose steep and difficult sides they are now preparing to climb,—with courage indeed, and a good hope, for success is in the power of all who earnestly strive for it, but not quite without anxiety, for we know by experience how many fail.

It would be but natural that thus at the outset of an arduous undertaking you should wish to form some estimate of your chances of success or failure. As these, with each one, depend mainly on his own exertions, it would of course be impossible to predict the probable

future of any particular individual. But recently Mr. Paget, of St. Bartholomew's, has published some statistics which may be taken to afford a fair general average.

He has been enabled to pursue the career of 1,000 medical students, and the results thus brought out are both interesting and instructive.

In the first place, 96, or nearly 10 per cent., left the profession; with these we have nothing further to do, but it may serve to remind you that if so many retired from it on the threshold the task you have taken in hand is no light one. But it must be your determination

"Neither to change, nor falter, nor repent."

Next, 128 died either during their pupilage or shortly after commencing practice; 25 of whom succumbed to diseases incurred in the discharge of their duties. So great a waste of life, though it may not exceed the average rate of mortality, shows that we do not observe in our own case those rules of hygiène which we try to enforce upon others. But it is as well to remember that good health is absolutely necessary for a proper discharge of your duties, and for success in a laborious profession.

You should, therefore, take care so to regulate your mode of working as to put no undue strain on your constitution, for I am sure it would be needless to caution you against habits of dissipation, which would be alike injurious to your health, debasing to your characters, and ruinous to your studies.

But if we cannot regard without feelings of regret and disappointment the untimely fate of those who were thus cut off with all their promises of usefulness still unfulfilled, how much deeper must be our sorrow when we have to deplore the death of one who was lost to the profession in the full maturity of his powers, in the midst of a career of usefulness? Such a loss, this Hospital and College have recently experienced in the late Mr. Moore. To those of you who knew him it would be needless for me to recall his memory. I will but mention two qualities

which particularly characterized him, and which have, indeed, been made the object of a somewhat unappreciative criticism,—they were, extreme caution and extreme boldness. The greatest caution in the discharge of the ordinary routine of practice, but when what might seem a desperate case presented itself, then he displayed a boldness which shrunk from no measures, however formidable, which afforded a chance of rescuing the patient; and it was these qualities which rendered him so eminently successful in the treatment of that terrible disease "Cancer," which this Hospital specially aims at relieving. It is also impossible to recall him to our recollection without bearing in mind that he ever had in view objects still higher than those of his profession, and that his life was illuminated by a light brighter than that of science.

The next class on our list is one still more gloomy. We find that 56 out of the 1,000 entirely failed, some from unavoidable misfortunes,—most, it is to be feared, from their own misconduct; but it would be a waste of time to dwell on this class:

"Of these we speak not, take one look and pass."

But it is now time that we turn to the brighter side. We find, first, that 23 achieved distinguished success, and 66 considerable success. These, I need hardly say, are very large proportions, for distinguished success can never be the lot of more than very few, those whom natural abilities, indomitable perseverance, and singleness of aim, have raised above the general level. And if there be such among you, as I trust there are, to you I would say, the field is open, your course is clear, the goal is before you, "so run that you may obtain;" and you may attain to eminent reputation, fill with distinction important positions in the community, or, better still, make some discovery which may serve to establish some great principle in our science, or effect some great improvement in our art.

But most of us have necessarily lower stations to fill, humbler duties to perform, and accordingly we find that

the next class, those who achieved a fair amount of success, includes 507, or upwards of half the whole number. And this degree of success is probably in the power of almost all to attain to.

Lastly, we find that 124 attained to a very limited success.

In conclusion, I would have you bear in mind that these averages and statistics, though they may be true of the whole, are entirely fallacious when applied to a part, and it rests with each one of you, within certain limits, to determine for himself in which of these classes he will take his place.

We may now pass on to consider briefly the nature of the profession you are about to enter and the means required to fit yourselves for it.

We are fond of saying that the medical profession, is one of the liberal professions, by which we should seem to claim some kind of superiority over those other avocations, which though far more necessary to the welfare, nay, the existence of society (those for instance which supply its material wants), we yet consider to be in some sense inferior to ours.

In what then does a liberal profession consist? Now, a liberal profession has been defined by one who was eminent both as a surgeon and a philosopher, the late Joseph Henry Green, as "the application of a science by its actual possessors to the wants of the community, and the cultivation of a science for its own sake must ever constitute the difference between a profession and a trade."

We demand then, he goes on to say, "of the members "of the medical profession, scientific aims and objects, "we denounce as empirics those who neglect and disclaim "science, we reject as tradesmen, those for whom their "profession is only a lucrative business; and we brand as "quacks those who dishonestly make it the means of "levying a tax on the hopes and fears of the credulous "and ignorant."

If we come to enquire in what the science of medicine consists, we shall find that it is essentially a branch of biology, or the science of life. It is in fact, human biology or the knowledge of the laws which regulate the development, structure, and functions of the human body, both in health and when modified by disturbing causes.

Now, whatever view we may take of the nature of life, whether with some we consider it as having a purely physical basis, and to be the product of a certain disposition of material molecules and correlated to the other physical forces, or whether with others we regard it as some mysterious principle, totally distinct in its nature and origin from all the other forces with which we are acquainted, no one doubts but that all the phenomena of vitality, all the functions of living beings are supported by physical and chemical processes.

A knowledge, therefore, of physics and chemistry is an essential part of the science of medicine.

But man does not stand alone in the world, a creature distinct in his physical organization from all other living things. He is only one link in a great chain of organized beings, united together by greater or less degrees of resemblances in structure and function. And it is found that in order to understand rightly many points in the development, structure, and functions of the human body some knowledge of these other forms of life is absolutely necessary.

Human anatomy, therefore, physiology and pathology, with chemistry, comparative anatomy and botany constitute the scientific foundation of your professional studies.

This may appear a sufficiently formidable list, especially as it must be looked upon as only preparatory to the chief objects which you have in view, viz:—the art of healing; for I presume you have not come here to be made chemists or botanists, or anatomists, or physiologists, or even mere pathologists; but practitioners of medicine and surgery.

And the inherent difficulties of these subjects are but too often increased by the unprepared state in which the student in many cases commences his attack upon them, not indeed necessarily from any shortcomings on his part, but from the defective system of education generally pursued in this country and which is only now beginning to give way under the pressure of a more enlightened opinion. Hence it is that much of the short time at our disposal is too often taken up in acquiring those elements of natural science which ought to be the possession of all who have received a liberal education.

Instead of teaching those parts of chemistry which are essential to the physiologist, the pathologist, or the therapeutist, instruction has to be given in the merest rudiments of chemical science; so the most elementary ideas in biology have to be instilled, and much time, which ought to be devoted to subjects more directly bearing upon medicine, has to be given to botany, which certainly ought to form a part of general education.

A great reform has, however, doubtless now begun, and it will not be long before that will cease to be considered a finished liberal education, which may leave a man ignorant of the nature of the air which he breathes, of the water he drinks, of the food he eats, of the earth on which he treads, and of the structure and functions of his own body, and of the other forms of life with which he is surrounded.

But these subjects, as I have said, however worthy each may be in itself of the study of a life-time, must, as far as we are concerned, be looked upon as only preparatory to our main object, and hence we have to add to this list those practical branches of knowledge, which constitute the art of healing, viz:—the practice of medicine, surgery, midwifery, with materia medica, or the properties and uses of drugs, and forensic medicine.

This long list of subjects may well seem at first sight far too extensive to be grappled with in so short a time, and an attempt to master them a hopeless task. And in

point of fact it will generally be found that of these, especially of the more strictly scientific ones, only a small portion admits of being taught, of that which is taught, only a part is learnt, and of that which is learnt much is rapidly forgotten.

And yet, notwithstanding this, if only the attention of the student has been directed to the right points, and the right methods of instruction have been employed, it will be found that sufficient of the details and general principles of these sciences will have been appropriated to serve as a sound foundation for that superstructure of practical knowledge on which his success as physician and surgeon will depend.

It is often said that if any particular branch of knowledge has been acquired, it matters little by what methods it has been learnt, and some enthusiastic believers in the all-sufficient efficacy of examinations have even wished to apply this principle to medical education, and to leave the student free to acquire his knowledge how and where he likes, merely compelling him to submit to the test of an examination.

This principle is, I believe, as far as we are concerned, completely erroneous, and with us the method in which many subjects are learnt is often of more importance than the actual amount which the memory has succeeded in retaining.

Now the methods employed in medical education are, *reading*, *lectures*, and *practical demonstrations*, and much of the value of what you learn will depend upon whether you have made a proper use of these methods.

Take, for example, perhaps the most important subject in the whole list—descriptive anatomy. This consists of an almost endless series of minute details of "processes, grooves, holes, cavities, of attachments, origins, insertions, relations, expressed in a barbarous nomenclature, and a great part of which, unless studied as a branch of comparative anatomy, is of little importance to know, and to remember almost impossible."

Now it is quite possible to get up all this by reading, by hearing lectures, by looking at diagrams and pictures, so perfectly that no amount of questioning would succeed in detecting a flaw. And such knowledge so acquired would be almost useless (unless for the purpose of passing an examination). The student would at a great expense of labour have burdened his memory with all this mass of details, the larger part of which will be soon forgotten, and what is retained will be unavailable for any practical purpose.

If, on the other hand, the student has learnt his anatomy in the dissecting-room, carefully laying bare for himself and tracing out all these complicated structures, then, although in this case also it is probable that much of what is of less importance will cease to dwell in his memory, he will nevertheless, by the discipline he has passed through, have acquired all that renders anatomy useful to the medical practitioner. His hand, his eye, will have been trained; skill acquired in the use of the knife; all the tissues of the body will be familiar to his sight and touch; and when it becomes necessary to apply his knowledge he will find it really available, though he no longer be able to describe accurately the attachments of the deep muscles of the back, or to run off on his finger the fourteen branches of the internal maxillary artery.

I might in the same way go through the other branches of your education, and show that in each there is a right and wrong way of studying them, but you will have no difficulty in seeing the difference between learning a subject and cramming it.

Endeavour, then, to learn your subjects practically, study as far as you can your anatomy in the dissecting-room, your chemistry in the laboratory, your morbid anatomy in the post-mortem theatre, the museum, and at the microscope, and look upon your reading and lectures as means to enable you to profit by these, and not these as mere subsidiaries to those.

But though I have thus laid so great a stress on the

importance of studying your subjects practically, nothing is farther from my intention than to underrate the value of systematic lectures.

In the extensive range of sciences which have to be traversed, all that the student of medicine can for the most part hope to acquire are certain general principles and such details as are required to understand these principles, or which may be necessary to the practice of his art. Hence the necessity of lectures which have the double use of directing the student to the necessary points which he has to master, and of preventing him from neglecting, for the sake of some parts of a subject which may take his fancy, other less attractive portions, which may yet be necessary for a scientific appreciation of the whole. They also afford him an opportunity of seeking explanations of those difficulties which he must necessarily meet with in his progress.

Thus, a wise student will look upon and use his lectures as a valuable aid, and not merely as a troublesome form which he is compelled to comply with, but which he seeks to render as little tedious as possible by taking care to be absent in spirit while obliged to be present in the flesh.

But if in those more theoretical and scientific branches it is of so great importance to study them practically, how much more so is it the case when we come to the crowning stage of your medical education to which these are but the preparatory steps. The practice of medicine, surgery and midwifery.

In whatever way theoretical branches of knowledge may be learnt, skill in a practical art can only be acquired by practising it. And the art of healing is no exception to this rule. But it differs in one important respect from all other practical arts, inasmuch as we have no raw material on which the unskilled hand may be exercised. —Our only materials are the lives and bodies of our fellow-men, to minister to whose infirmities, and to alleviate whose sufferings, is the function of our calling. And

although the interest we take in our patients must necessarily in the main be a scientific interest, to investigate the causes, discover the seat, observe the progress of the disease, to estimate the chances of success or failure, to watch the influence of our remedies, and finally, if, as too often happens, our efforts have been unsuccessful, to verify, unless some prejudice derived from the dark ages should intervene, the correctness of our diagnosis, or detect the hidden origin of the symptoms, by means of a post-mortem examination, and so derive fresh experience which may enable us to be more successful in our subsequent efforts.

And this purely scientific way of looking upon sickness is indicated by our very language. We convert a person into an abstraction, and for us the patient becomes a case.

Still in the medical practitioner this scientific interest must ever flow from and be subordinate to, an active spirit of benevolence which does not spring merely from that vague feeling of sympathy which all naturally experience at the sight of suffering, but which a little familiarity with it will soon wear off, but from a deeper sense of the sacredness of each individual life and of its claims on our devotion.

Hence it becomes necessary so to regulate the relations between medical schools and hospitals, that while the student has the fullest opportunity of practically studying his profession, his presence and working, so far from injuriously affecting the patients, shall on the contrary be made the means of increasing the efficiency of the hospital arrangements. And these objects are I believe fully attained in the manner in which clinical instruction is now given.

First of all you attend the hospital as spectators, you have the opportunity of seeing the different forms of disease, and the manner in which the various morbid conditions are investigated and treated, and these methods are explained to you by clinical remarks and lectures.

Soon you are called upon to take part yourselves in the practical work of the hospital, as clerks and dressers, first to the out-, then to the in-patients; you will acquire skill in the innumerable technicalities of our art, you will learn the use of all those instruments and appliances by which our means of diagnosis and treatment are rendered every day more and more precise and certain, the stethoscope, the ophthalmoscope, the laryngoscope, the microscope, the thermometer, together with all the simpler surgical manipulations, and at the same time your knowledge will be rendered accurate and systematic by having to keep records of all the cases treated in the hospital. Then, after filling these more subordinate posts, you will have the opportunity of taking the higher and more responsible offices of resident clinical assistant and house surgeon, in which you will be admitted to a more important share in the treatment of injuries and diseases.

And thus when you begin practice on your own account, you will be no mere novices furnished only with theoretical knowledge, and having still the most important parts of your profession to learn under disadvantageous circumstances, but will be thoroughly grounded in practice as well as theory, and well qualified to enter with credit on your professional career.

Let me then urge you to neglect no opportunity of taking these offices, and it is one advantage of a small school like ours which may well counterbalance many disadvantages, that no student who may desire it will find any difficulty in obtaining them, and I do not hesitate to say that one such office, even the lowest, the duties of which have been faithfully and punctually discharged, would be well worth all that array of splendidly bound books which I see waiting on the table to reward proficiency in the different classes of the past session.

There is yet one question connected with your studies which perhaps ought not to be passed over in silence, it is one indeed to which much more importance is often attached than it in reality deserves, and which is liable to

occupy a disproportionately large space in the mind of the medical student,—I mean the question of examinations.

Now there are two distinct classes of examinations which you are expected to undergo, and which differ both in their origin and in their objects. One imposed upon us by external authority, the other developed from within. The object of one being to protect the public against the negligent student, that of the other to aid the industrious in the pursuit of his studies.

The first of these two classes, which will doubtless appear to you to be far the most important, are those examinations which are imposed by the state for the protection of the public, to insure that all those who are admitted to the privilege of practising the art of healing, shall have attained a certain standard of knowledge and skill.

Now the necessity of such a test is a kind of opprobium to ourselves, for I need hardly say that the fact of a student having passed through the prescribed course of medical education ought in itself to be a sufficient guarantee for his fitness to practice his profession.

But unfortunately there is always a small minority of students who are incapable of raising their minds to any higher idea of their profession than as a means of enabling them to earn a livelihood with as little trouble as may be, and who, therefore, will confine their efforts to obtaining a minimum of the necessary qualifications, or whose wills and moral purposes are too feeble to resist any passing gratification for the sake of those higher objects which are alone worth striving for, and who, as they are insensible to higher motives, can only be induced to work by the lower one of fear, who study, in fact, a liberal profession in the spirit of slaves. To these no doubt the prospect of their examination is a powerful stimulant to exertion. But to the rest who work at their profession from higher motives, whose minds are imbued with some portion of the true spirit of science, these ex-

aminations are rather harmful, as tending to supplant those higher and truer motives by lower ones, and perhaps insensibly to lead the student to regard passing his examination with credit as one of the chief ends of his education. Hence, I think, we must regard these examinations as evils, though no doubt necessary ones.

With regard to the present system of conducting examinations, things are in a transition state; but there can be no doubt that very shortly all the present examining bodies will be superseded by one central board whose certificate will be made incumbent upon all; it only remains then, to consider whether it is worth your while to add to this necessary legal qualification any honorary marks of distinction, as the Fellowship of the Royal College of Surgeons, or a Degree in Medicine. I think, on weighing the advantages and disadvantages of such a course, the former will be found for many of you to preponderate. To take a merely prudential view, you are entering on a profession, the ranks of which are even now overcrowded, and in which success becomes daily more difficult. We have, indeed, now to expect a fresh accession to our numbers from an unexpected quarter, and for the future it is not with medical *men* only that you will have to compete. I think, therefore, no fair and honourable means of recommending yourselves to the confidence of the public should be neglected, and none can be more so than to be able to give evidence that you have undergone a more complete training and submitted to more stringent tests.

With regard to degrees in medicine, apart from the older English Universities, we have the University of London and the Scotch Universities, the latter now requiring a year's residence; and certainly nothing could be more advantageous to the student than, after completing his three years in London, to spend a year at one of the great Scotch schools in the study of the higher branches of professional knowledge; or, perhaps still better, if he can afford the time, to visit one of those continental schools whose centralized administration and admirable

organization enable them to offer advantages which our divided resources and feebler administration can scarcely afford. For most of you, perhaps, the University of London, as it is at our doors, will be the most convenient; and its medical degrees have now obtained a considerable reputation. If I might presume to criticize the proceedings of so able and enlightened a body as the Senate of that institution, I should be inclined to say that their regulations would lead one to think that the one object in life —at any rate in student life—is to pass examinations. For the degree of M.D., I believe they now require five; and certainly no one would object that they are conducted too laxly. But a considerable number of those who obtain its degrees find it necessary to procure, in addition, the licence of the older examining bodies; and, if we add to these five examinations, two for the College of Surgeons and two more for the College of Physicians or Society of Apothecaries, we shall have nine. Now, I think that a system which requires a student to pass nine examinations for the purpose of obtaining full recognition of having undergone a complete medical training, is one which might well be reformed.

The second class of examinations need not detain us long, for you will no doubt look upon them as of quite secondary importance. They, as I have said, differing both in their origin and object from the former, are simply intended to assist you in your studies. They are the class examinations which are held periodically in all the branches of your education, and their object is not, as is sometimes erroneously supposed, to enable you to enter into an intellectual competition with one another and to crown the successful competitor with a prize, but for the purpose of ensuring that your progress be safe, and your knowledge thorough and accurate. Hence you should use these as you would any other helps to your progress, quite irrespectively of whether you wish to compete for the prizes, for these can never be the real object of your efforts. For if to be impelled onwards chiefly from the fear of failing to

pass your examinations, would be to study in a slavish spirit, so to strive after proficiency in any branch of knowledge merely for the sake of gaining a prize would be to do so in a childish spirit, and either course would be unworthy of the dignity of students of science.

These prizes, therefore, are to be looked upon simply as graceful marks of the recognition of merit which, fairly won, may be honourably worn, and which may, perhaps, be useful in keeping alive a spirit of generous emulation.

The actual order and method of your studies it is unnecessary to pass in review. They have been laid down by authority, and, on the whole, are well calculated to obtain their object. But the very completeness with which the modern system of medical education is organized, the very helps which are meant to render your progress as rapid and easy as possible, are not without dangers of their own, they may lead you to rely too much on others, and not enough on yourselves.

I have heard it said by those who remember what may be called the good old times, when the system of medical education was very different to what it is now; when comparatively little assistance was given to the student, but he was left very much to his own exertions; and when the students themselves were very different to what a general change in the manners of society has since made them, that, then, with all their roughness, more real work was done, and more zeal was shown by the students than is sometimes the case under the present system, and that, though more is taught now and more was often learnt then. Certainly that system, imperfect as it was, produced men of whom the profession may well be proud. Those days, however, have gone by, and I do not suppose that the most inveterate praiser of the past would wish to see them return. But it rests with you to show that this reproach is entirely undeserved, and that you know how to enter with zeal and spirit into all the necessary details of your profession without sacrificing the refine-

ment of gentlemen, and intelligently to appropriate to yourselves and digest your knowledge, in spite of the temptation to sit still and be passively crammed.

This concludes the few remarks I had to make upon the nature of your studies, and the means to be used in order to attain proficiency in them. But I think that on an occasion like this, it is but right that we should for a moment cease to regard our profession merely as it concerns ourselves as individuals, and our personal interests, but look at it from a higher point of view, and consider what are its proper functions in society, and how those functions are performed. And especially at a time like the present, which is recognized by all to be one of rapid transition, alike by those whose affections, still clinging to the past, cannot view old and well-tried institutions undergoing transformation without some feelings of regret and anxiety, as well as by those, who believing the progress of society, like that of the physical world, to be one of natural evolution, look forwards with more confidence to its successive developments. And doubtless in our ranks both classes are to be met with, for we have a past to look back upon with pride, as well as a future to look forwards to with hope.

At a time then, when all established institutions are being severely scrutinized, and only those can hope ultimately to retain their position which are able to shew that they are really performing necessary or useful functions in the community. It may be well for us to enquire whether the medical profession, as a whole, does really perform what it professes, whether it lowers the rate of mortality, diminishes the total amount of sickness, and favours the growth of a robust and healthy population.

We should no doubt at once be inclined to answer, "it is incontestable," and that therefore our position is secure, and whatever changes may take place, we at least have only to look forward to a more extended field of usefulness, and I think rightly so. But there have not been wanting,

both in ancient and modern times, those who have urged objections to our claims.

This question was once debated by the best and wisest of the ancient world, and was answered in a manner we should hardly think satisfactory. And the reasons which led those illustrious men to advocate, if not our complete exclusion from the ideal state, at any rate so material a limitation of our office as to render it practically a nullity, are founded on a true insight into physiological laws, are eminently scientific and have therefore lost none of their force.

They distinctly seeing, what we are perhaps inclined to forget, that one main office of the State is to ensure, as far as may be, that all the members of the community shall be well trained and fitted for the discharge of the duties of their several stations, necessarily looked upon health as a first requisite, and having a true insight into hygienic principles and a distinct appreciation of what we now call the "law of heredity," saw that to rear the sickly, to prolong the career of the intemperate, to enable the constitutionally diseased to protract a useless existence and to beget children in all probability as unhealthy as themselves, was not the way to render a people healthy. They therefore maintained that "the healing art was revealed "by the gods for the benefit of those whose constitutions "were naturally sound, and had not been impaired by "their habits of life, but who, attacked by some specific "complaint, might be restored speedily to the discharge "of their duties. But, as for the constitutionally diseased "and the intemperate, they looked upon the existence of "such a man as no gain either to himself or others, and "believing that our art was not meant for persons of this "sort, considered that to attempt their cure would be "wrong."

Such were the opinions of these ancient philosophers, and it cannot be denied that such a system if fully carried out is well adapted to attain the desired ends. By only bringing up healthy children, the offspring of healthy

parents, by virtually weeding out the sickly, and by a careful physical training, there is little doubt but that many of those evils from which we suffer might be eradicated. It is, indeed, the method we employ when we wish to produce a healthy breed of the lower animals.

But since then I need hardly say we have had greater teachers than Plato, and have learnt a morality higher than that of Socrates, and holding now deeper views of the sanctity which attaches to each individual life, and recognizing the absolute supremacy of the moral law, to which all considerations, however apparently based on expediency or science, must give way, but with which, indeed, true science cannot possibly conflict, should shrink with horror from any proposal to treat our fellow-men in the manner in which we think ourselves justified in treating the lower animals, or from violating those rights which are equally sacred in the weakest and most helpless as in the strongest and healthiest.

What, then, is the alternative? Are we to continue to exhaust all the resources of our art, all the improved means which the advance of science places at our disposal, in rearing the scrofulous, training up the idiot, prolonging the career of the intemperate, enabling the phthisical to marry, and the syphilitic to beget children, to do all, in fact, in our power to counteract that beneficent law of nature which provides that in the struggle for existence the fittest shall survive and carry on the race?

Before attempting to answer this question, I will briefly refer to the modern objectors against the utility of our art, and who have arisen chiefly in our own ranks.

These urge that, apart from mere surgical or mechanical appliances, our power of controlling disease by the use of remedies is almost null, and that by attempting to interfere we really do more harm than good. Hence has arisen what is called the expectant school of treatment, in which the physician looks on as an intelligent spectator at the contest between the disease and the constitution of the

patient, but without departing from a position of "benevolent neutrality."

To show to what lengths this spirit of scepticism may be carried, I will read you the opinion of one of the most accomplished physicians of the present century, the late Dr. James Johnson, himself no sceptic. He says:—

"I declare it my conscientious opinion, founded on long experience and reflection, that if there were not a single physician, surgeon, apothecary, man-midwife, chemist, druggist, or drug on the face of the earth, there would be less sickness and less mortality than now obtains."

It is hardly necessary to answer seriously the objections of this school, which do not, indeed, touch our main position, and are themselves actually due to the great advances which have been made in our knowledge of the laws of health, the nature of disease, and in our power of controlling it.

This advance in our science, by overthrowing many well established prejudices, by shewing how weak was the foundation on which many of our most cherished practices rested, led inevitably to a period of scepticism, which, however, can never be more than a temporary phase, and it is one which for us has nearly passed away.

We have now a clearer knowledge of the true powers of the remedies we employ, and the objects to be aimed at in their administration; we know that many good effects which were formerly attributed to our remedies were really owing to the natural course of the disease, and some bad effects which we attributed to the disease were really due to the remedies, and that many remedies do not produce the physiological effects ascribed to them.

A deeper knowledge of pathology and improved means of diagnosis have taught us how many manifestations of disease, which our predecessors would have looked upon as groups of symptoms amenable to appropriate treatment, are really due to hopeless disorganization of vital organs. Where they saw perhaps comparatively unimportant affec-

tions; we see behind, a disorganized kidney, a liver almost converted into fibrous tissue, a heart whose valves have become thickened and rigid, a brain, whose nutrient arteries are converted into brittle tubes of chalk and oil. And though many diseases are quite under our control, and our means of successful treatment are being constantly increased, and admit of indefinite improvement, there is sure to remain a large class of cases whose condition has become absolutely hopeless long before the aid of the physician is invoked, or in whom the disease will run a definite course unaffected by any interference on our part. Hence, all we can hope to do in those cases is to alleviate.

But while our power of curing disease must always be limited, our power of preventing it admits of indefinite extention. And this is the true answer to those objections against the utility of our art, on the ground that by enabling the sickly to live and breed we are really promoting the growth of an unhealthy population.

Recognizing, as we do, that all forms of sickness whatever, whether it be those awful visitations of epidemic pestilence, which our terrified ancestors regarded as caused by the direct interposition of supernatural power, or those far more mysterious and inexplicable constitutional taints which, handed down from parent to child, are the fruitful cause of so much disease, are really due to material causes and governed by natural laws which are to a great extent under our control, it is clear that if we can succeed in removing these causes, and so cut off any fresh developments, then we may expect a gradual extinction even of the most distinctly hereditary diseases; for, do what we will, the tainted part of the community is far too heavily weighted to prevail ultimately in the race of life.

These, then, being the objects we have in view, I think that so far from being excluded from the ideal state, we should deserve a place among its guardians.

Our knowledge, indeed, of the causes of disease and of the means of preventing them, rudimentary as they still are, are yet far in advance of our actual practice.

For this we are not responsible, it is due to ignorance and consequent apathy or prejudice on the part of the great body of the people, and, as a necessary result, feebleness of action on the part of the executive.

The public are filled with horror and pity when they hear of the fearful slaughter of the battle field, of the sufferings of the wounded, of the affliction of the bereaved relations; but when they read that in ten years upwards of 180,000 persons died in the United Kingdom of continued fever alone, and far larger numbers of other forms of preventible disease, their imaginations are scarcely at all impressed, their sympathies little aroused; and yet we must remember that these victims to our defective social organization fell in no glorious cause, sacrificing their lives willingly for the honour of their flag, the safety of their country, and whose memories will ever be held dear by a grateful people. They languished away obscurely, unregarded, and their very suffering and death only too often were the means of spreading the deadly contagion among those dearest to them.

It is no doubt satisfactory to reflect that these evils are due to want of knowledge merely, and not to want of benevolence.

That of benevolence there is no lack, the very place where we are assembled is sufficient to show. The charitable and humane will munificently build splendid hospitals, furnish them with every appliance which can alleviate suffering or cure disease, attach to them schools of medicine where the science and art of healing may be successfully pursued, and perhaps not one hundred yards from the gates of such an institution will be found streets and houses, the condition of which and of their inhabitants will be inevitably far more potent in producing disease than all the resources of the hospital can ever hope to be in curing it.

Much indeed has of late been done to remedy these evils, and the success which has attended these partial efforts may well encourage us to proceed.

But, for anything like a complete and effectual system we must no doubt wait till the spread of scientific education, though the body of the people shall forcibly bring home these truths to their minds, and so at last result in an executive not only sufficiently enlightened to see the paramount importance of these questions to the welfare of the community, but sufficiently instructed to devise effectual means for their solution, and sufficiently strong to enforce these means.

Thus you will see that the true function of our profession is not only to alleviate individual cases of suffering, but also to attack the very sources from which these sufferings flow.

You are indeed now enlisted in the army of light, whose duty it is to war with evil. Others may have the higher office of fighting against moral evils, others again of contending against political evils; it is ours to combat physical evils, and so close is the mutual alliance between these different forms, and so great their dependence upon one another, that in attacking one we do in fact assail all. Such, therefore, being your calling, it rests for you now to render yourselves worthy of it. So use then your opportunities here that when your period of training is over, and you leave these walls to begin your great battle with disease and death, you may indeed be well armed and equipped for the contest.

With moral principles strengthened and braced by habits of industry and perseverance, with intellects freed from prejudices, clear seeing, open to the truth, well furnished with scientific and practical knowledge, with faculties disciplined for the work they have to perform, eyes skilled to see, ears practised in hearing, hands trained to obey all the behests of a sound and ready judgment, and thus you may show yourselves not unworthy representatives of this great hospital, useful citizens of our country, among whose many glories, not the least are these beneficent discoveries which have been made by her sons in the science and art of medicine; and

lastly, and above all, true and earnest workers in that profession which is confined to no people and no country, but whose object is the relief of evils common to the whole human family, the profession to which you have to-day devoted your lives.

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